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Kamen et al.(10) **Pub. No.: US 2019/0249657 A1**(43) **Pub. Date: Aug. 15, 2019**(54) **PERISTALTIC PUMP**(71) Applicant: **DEKA Products Limited Partnership**,
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Merrimack, NH (US)(21) Appl. No.: **16/389,042**(22) Filed: **Apr. 19, 2019****Related U.S. Application Data**

(63) Continuation of application No. 15/808,099, filed on Nov. 9, 2017, now Pat. No. 10,316,834, which is a continuation of application No. 14/873,515, filed on Oct. 2, 2015, now Pat. No. 10,202,970, which is a continuation of application No. 13/725,790, filed on Dec. 21, 2012, now Pat. No. 9,677,555, which is a continuation-in-part of application No. 13/333,574, filed on Dec. 21, 2011, which is a continuation-in-part of application No. PCT/US11/66588, filed on Dec. 21, 2011, said application No. 14/873,515 is a continuation-in-part of application No. 13/723,238, filed on Dec. 21, 2012, now Pat. No. 9,759,369, which is a continuation-in-part of application No. 13/723,235, filed on Dec. 21, 2012, now Pat. No. 9,400,873, which is a continuation-in-part of application No. 13/724,568, filed on Dec. 21, 2012, now Pat. No. 9,295,778, which is a continuation-in-part of application No. 13/723,239, filed on Dec. 21, 2012, now Pat. No. 10,108,785, which is a continuation-in-part of application No. 13/723,242, filed on Dec. 21, 2012, which is a continuation-in-part of application No. 13/723,244, filed on Dec. 21, 2012, now Pat. No. 9,151,646, which is a continuation-in-part of application No. 13/723,251, filed on Dec. 21, 2012, now

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(57)

ABSTRACT

A peristaltic pump and related-method are disclosed that includes a cam shaft having a plunger cam, a plunger-cam follower that engages the plunger cam of the cam shaft, a tube receiver, a spring, a plunger, a position sensor, and a processor. The tube receiver receives a tube. The spring provides a bias. The plunger is biased toward the tube by the spring and the plunger is to the plunger-cam follower, such that expansion of the plunger cam along a radial angle intersecting the plunger-cam follower as the cam shaft rotates actuates the plunger away from the tube. The position sensor determines a position of the plunger and the processor estimates fluid flow within the tube utilizing the position of the plunger.

